What is claimed is:

1. A medical device comprising:

(a) a substrate having a surface; and

(b) a hydrogel coating disposed over at least a portion of the substrate surface and comprising inner and outer regions, said inner region exhibiting more absorption upon hydration than does said outer region, said inner region comprising a first hydrogel polymer and said outer region comprising a second hydrogel polymer, said first and second hydrogel polymers being the same or different, and said hydrogel coating further comprising a contrast agent,

wherein said hydrogel coating is differentiated from the environment surrounding the hydrogel coating under magnetic resonance imaging upon insertion or implantation of said medical device into a patient.

2. The medical device of claim 1, wherein said first and second hydrogel polymers are the same.

3. The medical device of claim 1, wherein said first and second hydrogel polymers are different.

4. The medical device of claim 2, wherein said first and second hydrogel polymers comprise polysaccharide or polypeptide chains.

5. The medical device of claim 3, wherein said first and second hydrogel polymers comprise polysaccharide or polypeptide chains.

6. The medical device of claim 2, wherein said first and second hydrogel polymers are selected from alginic acid, hyaluronic acid, acrylic acid, methacrylic acid, chitin, chitosan, carboxymethyl chitosan, carboxymethyl cellulose, hydroxypropyl cellulose, collagen, gelatin, poly(hydroxy ethyl methacrylate), polyvinyl alcohol, polyacrylamide, poly (N-vinyl pyrrolidone), polyethylene oxide, hydrolyzed polyacrylonitrile, polyethylene amine, heparin, heparin sulfate, dextran, carboxymethyl dextran,

chondroitin sulfate, cationic guar, cationic starch, carboxymethyl starch, gellan, xanthan, and salts and copolymers thereof.

7. The medical device of claim 3, wherein said first and second hydrogel polymers are selected from alginic acid, hyaluronic acid, acrylic acid, methacrylic acid, chitin, chitosan, carboxymethyl chitosan, carboxymethyl cellulose, hydroxypropyl cellulose, collagen, gelatin, poly(hydroxy ethyl methacrylate), polyvinyl alcohol, polyacrylamide, poly (N-vinyl pyrrolidone), polyethylene oxide, hydrolyzed polyacrylonitrile, polyethylene amine, heparin, heparin sulfate, dextran, carboxymethyl dextran, chondroitin sulfate, cationic guar, cationic starch, carboxymethyl starch, gellan, xanthan, and salts and copolymers thereof.

8. The medical device of claim 2, wherein said inner and outer regions are each crosslinked.

9. The medical device of claim 3, wherein said inner and outer regions are each crosslinked.

10. The medical device of claim 1, wherein said inner and outer regions are each crosslinked and wherein the crosslink density of said outer region is higher than the crosslink density of said inner region.

11. The medical device of claim 1, wherein said inner and outer regions are each crosslinked and wherein said outer region comprises an ionic crosslinking agent and wherein said inner region comprises a covalent crosslinking agent.

12. The medical device of claim 11, wherein said ionic crosslinking agent comprises a multivalent cation.

13. The medical device of claim 12, wherein said multivalent cation is selected from calcium, magnesium, barium, strontium, boron, beryllium, aluminum, iron, copper, cobalt, lead and silver cations.

14. The medical device of claim 12, wherein said multivalent cation is a calcium ion.

15. The medical device of claim 11, wherein said covalent crosslinking agent is a polyfunctional crosslinking agent.

16. The medical device of claim 15, wherein said polyfunctional crosslinking agent comprises diazonium, azide, isocyanate, acid chloride, acid anhydride, imino carbonate, amino, carboxyl, epoxy, hydroxyl, aldehyde, carbodimide, or aziridine groups.

17. The medical device of claim 15, wherein said polyfunctional crosslinking agent is a polyfunctional aziridine compound.

18. The medical device of claim 11, wherein said first and second hydrogel polymers comprise alginic acid or a salt of alginic acid.

19. The medical device of claim 1, wherein said first region comprises said contrast agent.

20. The medical device of claim 1, wherein said contrast agent comprises paramagnetic ions.

21. The medical device of claim 20, wherein said paramagnetic ions are selected from chromium (III), manganese (II), iron (III), iron (II), cobalt (II), copper (II), nickel (II), praseodymium (III), neodymium (III), samarium (III), ytterbium (III), gadolinium (III), terbium (III), dysprosium (III), holmium (III) and erbium (III).

22. The medical device of claim 1, wherein said contrast agent comprises gadolinium (III) ions.

23. The medical device of claim 1, wherein said contrast agent comprises a paramagnetic ion chelation complex.

24. The medical device of claim 23, wherein said paramagnetic ion chelation complex is covalently bonded to said first hydrogel polymer.

25. The medical device of claim 23, wherein said paramagnetic ion chelating complex comprises organic acid functional groups.

26. The medical device of claim 25, wherein said paramagnetic chelation complex comprises diethylenetriamine pentaacetic acid (DTPA).

27. The medical device of claim 1, wherein said contrast agent comprises paramagnetic particles.

28. The medical device of claim 1, further comprising a lubricious coating layer disposed on said hydrogel coating.

29. The medical device of claim 1, wherein said medical device is selected from the group consisting of a catheter, a guide wire, a balloon and a stent.

30. The medical device of claim 29, wherein said catheter is a neuro-interventional microcatheter.

31. The medical device of claim 29, wherein said stent is selected from the group consisting of endovascular, biliary, tracheal, gastrointestinal, urethral, ureteral and esophageal stents.

32. The medical device of claim 29, wherein the stent is a coronary stent.

33. The use of the medical device of claim 1 in a medical procedure, wherein during or after insertion or implantation of said medical device in a patient, the position of the medical device is viewed under magnetic resonance imaging.

34. A medical device comprising:

(a) a substrate; and

(b) a hydrogel coating comprising a contrast agent and a polysaccharide hydrogel polymer disposed over at least a portion of the substrate surface, said hydrogel coating comprising an inner region that comprises a covalent crosslinking agent and an outer region that comprises an ionic crosslinking agent;

wherein said hydrogel coating is differentiated from the environment surrounding the hydrogel coating under magnetic resonance imaging, upon insertion or implantation of said medical device into a patient.

35. The medical device of claim 34, said ionic crosslinking agent comprises a multivalent cation, and said covalent crosslinking agent comprises a polyfunctional covalent crosslinking agent comprising diazonium, azide, isocyanate, acid chloride, acid anhydride, imino carbonate, amino, carboxyl, epoxy, hydroxyl, aldehyde, carbodimide, or aziridine groups.

36. The medical device of claim 34, wherein said polysaccharide hydrogel polymer is alginic acid or a salt thereof, said ionic crosslinking agent comprises calcium cations, and said covalent crosslinking agent comprises a polyfunctional aziridine compound.

37. The medical device of claim 34, wherein said first region comprises said contrast agent.

38. The medical device of claim 34, wherein said contrast agent comprises gadolinium (III) ion and a chelating ligand comprising organic acid functional groups.

39. The medical device of claim 34, wherein said contrast agent comprises a gadolinium (III) diethylenetriamine pentaacetic acid complex.

40. The medical device of claim 34, wherein said outer region comprises plasticizer.

41. The medical device of claim 34, wherein said inner and outer regions further comprise a salt.